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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,351	09/08/2003	Woo-Sung Kim	139-035U	9026
23429	7590	05/09/2006	EXAMINER	
GREGORY SMITH & ASSOCIATES 3900 NEWPARK MALL ROAD, 3RD FLOOR NEWARK, CA 94560			TUPPER, ROBERT S	
			ART UNIT	PAPER NUMBER
			2627	

DATE MAILED: 05/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/657,351	<b>Applicant(s)</b> KIM ET AL.	
	<b>Examiner</b> Robert S. Tupper	<b>Art Unit</b> 2627	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 6,15 and 19-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7-12,14 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 4 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2627

1. Claims 6, 15, and 19-25 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention or species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 6/3/05.

2. Claims 1-3, 5, 8-12, 14, 17, and 18 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by KOYANAGI et al (6,785,090).

Note figure 2. KOYANAGI et al shows a hard disk drive (figure 1) with a disk mounting hub having a cylindrical body (23) with an outside diameter and a inner cylindrical mounting member with an inside diameter that receives the disks, and a conical surface of revolution (not numbered) immediately adjacent the mounting member, where the conical surface of revolution is disposed at an oblique angle to the central axis of the hub. The disk mounting system includes a clamping member (31) which is bolted to the hub and exerts a clamping force as recited in claims 3, 9, 12, 17, and 18.

Note that there is no recitation in claims 1 and 10 of what surface of the hub the disk contacts.

3. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over KOYANAGI et al (6,785,090).

KOYANAGI et al shows a disk drive with disk mounting hub substantially as claimed. KOYANAGI et al differs in not specifying the material used for the hub.

The Examiner takes Official Notice that aluminum is well known and commonly used for mounting hubs in disk drives.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize aluminum for the mounting hub in KOYANAGI et al. The motivation is as follows: one of ordinary skill in the art would use any commonly used material where none was specified.

4. Claims 4 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Applicant's arguments filed 2/27/06 have been fully considered but they are not persuasive.

Applicant argues that the hub of KOYANAGI et al lacks a conical surface of revolution which is disposed at an oblique angle to the central axis.

This is in error. Figure 2 of KOYANAGI et al clearly shows an inclined face ( not numbered but immediately adjacent the inner vertical surface that projects through the inner holes of the disks). This reads on the "conical surface of revolution disposed at an oblique angle to the central axis" recited in claim 1.

Note that claim 1, even as now amended, still does not recite which surface of the hub the disk is clamped to. Further, claim 1 does not preclude the presence of

surfaces other than the conical surface of revolution outside the cylindrical disk mounting member.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert S. Tupper whose telephone number is 571-272-7581. The examiner can normally be reached on Mon - Fri, 6:30 AM - 4:00 PM (first Fri off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert S Tupper  
Primary Examiner  
Art Unit 2627

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